

In the claims

2001  
ax  
1. (Once Amended) A method of food product testing, such method including the steps of taking a sample of a food product and preparing the sample for assay of genomic material from a plurality of target species potentially present in the food product, and contacting the prepared food sample with an array of probes directed to multiple regions of genomic material for each of a plurality of said target species such that said material hybridizes at loci of said array, to simultaneously detect genomic material from a plurality of said target species, and forming an output distribution of the species in the food sample.

2. (Once Amended) The method of claim 1, wherein the step of preparing includes the step of culturing the food sample to increase populations of a plurality of the target species prior to testing with the array of probes.

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7. (Once Amended) The method of claim 6, further wherein a computer operates upon an output of an array reader to output said distribution, and including the steps of storing an output distribution in a database together with data regarding the food sample from which the distribution is derived, and operating a data mining program effective to correlate a detected distribution with stored database information.

8. (Once Amended) The method of claim 1, wherein the step of preparing the sample includes the steps of recovering a plurality of different microorganisms from the food sample, extracting DNA from the plural different microorganisms, and simultaneously amplifying plural target sequences present in the recovered DNA for each of said different microorganisms.

9. (Once Amended) The method of claim 1, further comprising the step of correlating the output distribution with a database wherein the database includes data of at least one type selected from among

(i) other output distributions,

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(ii) parameters related to the source, condition or processing of food in the sample from which the output distribution was taken, and  
(iii) parameters related to the source, condition or processing of food in the sample from which other output distributions were taken.

Claims 10 - 13 are canceled.

Sub 02  
03

14. (Once Amended) A testing method comprising the steps of  
preparing an array having plurality of probes directed to target sequences of each of a defined plurality of different target species  
preparing a sample, wherein the step of preparing a sample includes extracting DNA from the sample, including sequences of the species present in the sample,  
treating the extracted DNA with a PCR protocol effective to preferentially and simultaneously increase the level of target DNA sequences of the defined plurality of different target species, and  
hybridizing the amplified DNA to the probes on the array and forming an output distribution representative of the target species present in the sample.

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18. (Once Amended) The testing method of claim 14, wherein the target sequences include species sequences coding for factors involved in pathogenesis or virulence factors.

Claim 22 is canceled

Please add the following new claims 23-25.

Sub 03  
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23. The testing method of claim 14, wherein the target sequences are species sequences selected for efficient probe hybridization and detection as a group.

24. The testing method of claim 14, further including the steps of determining sensitivity and cross reactivity of the array.

25. The testing method of claim 14, wherein the output distribution indicates amount of each target species present in the sample.